

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2008-0015

WASTE DISCHARGE REQUIREMENTS  
FOR  
J. G. BOSWELL  
CORCORAN TOMATO PROCESSING FACILITY  
KINGS COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Water Board) finds that:

1. J. G. Boswell (hereafter known as Discharger), a California corporation, submitted a Report of Waste Discharge (RWD) dated 5 April 2007 to obtain Waste Discharge Requirements (WDRs) for the discharge of tomato processing wastewater from the J. G. Boswell Corcoran Tomato Processing Facility (Facility). The Discharger proposes to discharge an average of 1.4 million gallons per day (mgd) and to recycle the wastewater on about 540 acres of agricultural land (Use Area) that is southwest and adjacent the Facility.
2. The Facility is at the northeast corner of Dairy Avenue (6th Avenue) and Paris Avenue in Kings County just south of the City of Corcoran. The site formerly contained an Onion Processing Plant that the Discharger is converting into a tomato processing facility. The proposed Use Area (discharge area) is contained within Section 34 of T21S, R22E, MDB&M, as shown on [Attachment A](#), which is attached hereto and made a part of this Order by reference. The Discharger also partially owns and operates the Rio Bravo tomato processing facility in Buttonwillow, Kern County.
3. The Discharger plans to process 1,700,000 pounds (850 tons) of tomato paste daily from about 5,000 tons of raw tomatoes. The processing season typically starts in the last week of June and extends through the third week of October, depending upon crop production for the given year. That translates to about 120 days of processing and results in the facility processing about 204 million pounds of tomato paste from about 600,000 tons of tomatoes annually.
4. Tomatoes will enter the Facility in trucks, be weighed, and graded. The tomatoes will be initially rinsed with an evaporate water, then rinsed twice with clean well water before being delivered to the sorting area. From the sorting area, tomatoes will be delivered to the choppers for processing and then to mix tanks for further processing. [Attachment B](#), which is attached hereto and made a part of this Order by reference, depicts the general process flow of the proposed processing plant and the discharge.
5. Tomatoes unsuitable for processing (culls) will be removed and diverted for use as cattle feed or hauled offsite and used as fertilizer on adjacent cropland. The Discharger estimates approximately 115 tons of tomato skins and peels will be produced daily during the processing season. Seeds and peels will be separated and diverted as cattle feed or hauled offsite and used as fertilizer on adjacent cropland.

6. The RWD presents information on site conditions, the planned tomato processing facility, wastewater quantity and quality, and the conceptual design of the Facility.

**Discharge of Wastewater**

7. Estimates indicate the discharge will be comprised of non-contact cooling water (~ 5%), boiler feed water (~ 0.5%), distilled water from evaporator condensate (~ 69%), unloading water (~ 20%), , plant and equipment wash down water (~ 2%), and tomato rinse water (~ 1.5%). The remaining percentage (sanitary water) is discharged to the City of Corcoran’s wastewater treatment plant.
8. The Discharger reports using various chemicals in the processing activities with the chemicals used in three general areas, the boiler, the sorting tables, and the processing equipment area. Four chemicals are used in the boiler area. They include Series 212 Return Line Treatment, Series 730 Liquid Catalyzed Sulfite, Series 418 Boiler Water Treatment, and Series 708 Caustic Sludge Conditioner. The Discharger reports the Rio Bravo facility uses; 990 gallons of Series 212, which has a pH of 12.5; 3,245 gallons of Series 730, which has a pH of 5.5; 4,620 gallons of Series 418 which has a pH of 10, and ~ 495 gallons of Series 708, which has a pH of 11.1. Cleaner L-130 is used at the sorting tables. The Rio Bravo facility uses about 3,420 gallons of L-130, which itself has a pH of 12.0 when applied. The cleaner mixes with wash water and has a pH of about 7.5 when discharged to the holding pond. Cleaners L-145 and L-175 are used to clean the processing equipment. The pH of L-145 and L-175 are 12.8 and 7.0, respectively. The processing equipment is to be cleaned before and after the processing season, and once every 40 days during the processing season. Following the cleaning of the processing vessels, the vessels are filled to capacity with clean water and triple rinsed.
9. The Discharger estimates a flow rate of 1.4 million gallons per day (mgd) during the processing season. All discharge from the Facility will be combined into a collection sump that will be located on site. The discharge will be pumped from the sump through a pipeline to a holding pond located on the adjacent Use Area.
10. The Discharger has indicated the processes for the Facility will be similar to those from Rio Bravo and has provided effluent analytical data to estimate the anticipated effluent quality from the Facility.

<u>Constituent</u> <sup>1</sup>	<u>Average</u>	<u>Range</u>
Biochemical Oxygen Demand	247	36 – 490
Chloride	58	47 – 83
Conductivity (µmhos/cm)	601	450 – 1,200
Sodium	57	19 – 70
Sulfate	55	40 – 76
Total Nitrogen	28	11 – 110
Total Dissolved Solids	383	290 – 693
Total Suspended Solids	86	59 – 120

1 All results are in milligrams per liter (mg/L) except conductivity, which is reported in micromhos per centimeter (µmhos/cm).

### **Water Recycling**

11. The Discharger will recycle wastewater to the 540-acre Use Area southwest of the Facility to irrigate crops. Typical crops will include, but are not limited to, alfalfa and Sudan Grass, and at times cotton, wheat, and pasture crops, etc.
12. Wastewater collected in the collection sump will be pumped through an underground pipeline that discharges into a retention pond situated within the central portion of the Use Area. The discharge will be blended with a combination of municipal supply water, groundwater from onsite wells, and canal water. The blended wastewater will then be applied to about 400 acres of the 540-acre Use Area using a center pivot irrigation system. Residence time in the retention pond will typically be 16 to 18 hours. The short residence time reduces the possibility that anaerobic conditions will cause odors.
13. The retention pond was constructed at one foot above grade and is 50 feet by 1,315 feet. The retention pond was constructed with a compacted clay-lined base. Inboard slopes are 3:1. With two feet of freeboard and five-inches of sediment on the bottom, the volume of the pond is about nine (9) acre feet.
14. The blended wastewater shall be applied at plant uptake rates for both nutrient and hydraulic loading during the growing season. The canal water to wastewater ratio shall be at least one to one and often higher during the summer months to meet crop demands. The center pivot sprinkler system will apply the blended wastewater at a rate of about 0.5 inch per day. The frequency will be daily and will allow applied wastewater to infiltrate completely before the next application.
15. The wastewater characteristics should be similar to the discharge from the Rio Bravo plant. Assuming application as described above (0.5-inch every day), the Biochemical Oxygen Demand (BOD) loading rates will be very low. The maximum BOD loading rate will be about 8 pounds per acre and the instantaneous BOD loading rate will be about 13 pounds per acre per day.
16. Based on the anticipated flow rates and concentrations, nitrogen will be applied to the soil at a rate of less than 220 pounds per acre per year (lb/ac/yr). The Discharger will typically grow alfalfa and Sudan grass that have annual plant uptake rates of 480 lb/ac and 220 lb/ac, respectively. The crops will require supplemental nitrogen fertilizer. Additional loading analyses will be required should other crops be grown.

### **Site-Specific Conditions**

17. The Facility and Use Area are in an arid climate characterized by hot dry summers and mild winters. The rainy season generally extends from November through March. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and evaporation in the discharge area are about 11 inches and 63 inches, respectively, according to information published by the California Department of Water Resources (DWR).

18. Area soils at the Use Area are primarily the Armona loam and the Vanguard sandy loam with lesser amounts of the Homeland fine sandy loam and the Gepford loam according to the USDA Natural Resources Conservation Service. These soils are all listed as poorly drained and are saline to alkaline. The soils are known to have high pH and are typically treated with soil amendments (gypsum, sulfur, and acid forming fertilizers) to improve drainage, salinity, and excess alkali conditions. The entire Use Area is underlain with subsurface (tile) drains to intercept irrigation water before it percolates to the shallow groundwater table. The effluent discharges into an evaporation pond operated by the Tulare Lake Drainage District and regulated by WDR Order No. 93-136.
19. The Facility and Use Area are within a 100-year floodplain according to Federal Emergency Management Agency (FEMA) maps (Map No. 0600860225B). However, the Facility was designed with building pads above the estimated flood plain elevation of 292 feet above mean sea level (MSL) and has a flood plain certification from the FEMA National Flood Insurance Program indicating the base of all structures will be constructed at an elevation of no less than 295 feet MSL. Additionally, discharge does not occur to the Use Area during the rainy season (November through April) and all drainage is contained on-site. The retention pond within the Use Area was designed so that no offsite runoff will enter the pond (embankments 9 feet above existing grade).
20. Land use in the vicinity is primarily agricultural and some urban industrial and urban commercial properties between the Facility and the City of Corcoran. According to DWR land use data for Kings County published in 2003, the primary crops grown within five miles of the Use Area include field crops such as cotton, pasture crops such as alfalfa, grain and hay crops, and to a lesser extent vineyards. Several parcels east of the Facility are listed as containing native vegetation or as being water surfaces. The water surface designations are due to the high groundwater table and the poor permeability and drainage of the regional soils.

### **Groundwater Considerations**

21. Regional groundwater is contained generally in two aquifers, the Lower Confined Aquifer and the Upper Unconfined Aquifer. The two aquifers are separated by a confining layer (Corcoran Clay or E Clay) present beneath the Use Area at about 450 to 500 feet bgs and is reported to be 80 to 100 feet thick in this area. Although hydraulic continuity between aquifers is restricted, some agricultural wells within the vicinity are likely screened within the upper and lower aquifers to maximize well production. The potential exists for hydraulic continuity between the two aquifers resulting in lower quality water from the uppermost aquifer to migrate into the higher quality aquifers just above and below the E-clay.
22. The Discharger collected shallow groundwater samples from five soil borings advanced within the Use Area and from the tile drain that intercepts irrigation water. The analytical results for the shallow groundwater are summarized in the following table.

**Constituents<sup>1</sup>**

<b><u>Sample ID</u></b>	<b><u>pH (su)</u></b>	<b><u>Conductivity (umhos/cm)</u></b>	<b><u>Total Nitrogen</u></b>	<b><u>TDS</u></b>	<b><u>Sulfate</u></b>	<b><u>Chloride</u></b>	<b><u>Sodium</u></b>
No. 1	7.5	1,041	10	883	330	16.9	38
No. 2	8.0	7,780	23.7	5,195	1,909	769	1,341
No.3	7.5	2,732	3.1	2,123	967	88.2	252
No. 4	7.9	1,840	6.9	1,990	418	242	252
No. 5	7.7	3,754	18.6	3,043	1,599	202	252
Tile Drain	7.9	3,628	0.5	2,078	1,038	319	352
MCL <sup>2</sup>	6.5 – 8.5	900	na <sup>3</sup>	500	250	250	na <sup>3</sup>

1. All units reported in milligrams per liter unless noted otherwise. (su) = standard pH Units, (umhos/cm) = micromhos per centimeter.
2. MCL = maximum contaminant level.
3. na = not available.

The data indicates the general poor quality of the perched groundwater or first encountered groundwater beneath the Facility and the Use Area. All Electrical Conductivity (EC), sulfate, and Total Dissolved Solids (TDS) concentrations exceed the recommended secondary maximum contaminant limits (MCLs) for each constituent. An MCL has not been established for sodium, but the reported concentrations in the shallow groundwater preclude its irrigation usage for even the most salt tolerant crops.

23. The Facility will have three sources of supply water: City of Corcoran municipal supply wells, JG Boswell wells, and irrigation water from nearby canals. City of Corcoran municipal supply wells extract water from below the E-clay. Water quality data from the City wells in 2005 had the following characteristics.

<b><u>Constituent<sup>1</sup></u></b>	<b><u>Average</u></b>	<b><u>Range</u></b>
Arsenic (ug/L)	21.4	9 – 55
Boron (ug/L)	10	ND <sup>2</sup> – 200
Chloride (mg/L)	22	7 – 49
Conductivity (umhos/cm)	317	210 – 490
Nitrate	12.6	ND – 51
Sodium (mg/L)	56	47 – 82
Sulfate (mg/L)	26	3 – 69
Total Dissolved Solids (mg/L)	221	160 – 310

1. ug/L = micrograms per liter, mg/L = milligrams per liter, umhos/cm = micromhos per centimeter.
2. ND = Not detected above the laboratory method detection limit.

The Discharger provided 2004 data for a well designated “Boswell Well 167” that is proposed as a source of water to blend with wastewater. The concentrations are listed in the following table.

<u>Constituent<sup>1</sup></u>	<u>Concentration</u>
Boron (ug/L)	70
Bicarbonate (mg/L)	122
Chloride (mg/L)	4
Conductivity (µmhos/cm)	300
Nitrate	ND <sup>2</sup>
<u>Total Dissolved Solids (mg/L)</u>	<u>192</u>

1. ug/L = micrograms per liter, mg/L = milligrams per liter, µmhos/cm = micromhos per centimeter.
2. ND = Not detected above the laboratory method detection limit.

The third proposed source of supply water is canal water. The Discharger provided data from 2003 through 2006 for three sources of canal water that is proposed as sources of freshwater to blend with wastewater. The averages and ranges of the data presented are summarized below.

<u>Constituent<sup>1</sup></u>	<u>Average</u>	<u>Range</u>
Bicarbonate	62.5	18.3 – 134.2
Boron (ug/L)	155	ND <sup>2</sup> – 410
Chloride (mg/L)	3.8	1.7 – 11.9
Conductivity (µmhos/cm)	175	0 – 500
Nitrate	0.24	ND – 1.1
<u>Total Dissolved Solids (mg/L)</u>	<u>112</u>	<u>26 – 320</u>

1. ug/L = micrograms per liter, mg/L = milligrams per liter, µmhos/cm = micromhos per centimeter.
2. ND = Not detected above the laboratory method detection limit

24. The EC of the source waters ranges from about 200 to 500 micromhos per centimeter (µmhos/cm). The anticipated EC of the wastewater ranged from about 450 to 1,200 µmhos/cm, with an average of about 600 µmhos/cm. At the upper concentrations, the EC of the discharge could exceed the water quality objective from the Basin Plan of source water EC plus 500 umhos/cm. However, the annual average EC of wastewater will be below 900 umhos/cm and the average EC of shallow groundwater is about 3,400 umhos/cm.
25. Groundwater elevation data obtained from the soil borings advanced around the perimeter and within the Use Area indicated water was encountered at depths from three to seven feet bgs. Water depths within the Use Area were greater than five feet bgs due to the presence of the tile drains.

### **Basin Plan, Beneficial Uses, and Water Quality Objectives**

26. The *Water Quality Control Plan for the Tulare Lake Basin, 2nd Edition*, (hereafter Basin Plan) designates beneficial uses, establishes numerical and narrative water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates by reference plans and policies of the State Water Board. Pursuant to Section 13263(a) of the California Water Code (CWC), these waste discharge requirements implement the Basin Plan.
27. Water in the Tulare Lake Basin is in short supply, requiring importation of surface water from other parts of the State. The Basin Plan encourages recycling on irrigated crops wherever feasible and indicates that evaporation of recyclable wastewater is not an acceptable permanent disposal method where the opportunity existing to replace an existing uses or proposed use of fresh water with recycled water.
28. The Facility and Use Area are in Detailed Analysis Unit (DAU) No. 241 within the Tulare Lake Basin hydrologic unit. The Basin Plan designates the beneficial uses of groundwater in this DAU as municipal and domestic supply, agricultural supply, and industrial process and service supply.
29. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, requires waters designated as domestic or municipal supply to meet the MCLs specified in Title 22. The Basin Plan's incorporation of these provisions by reference is prospective, and includes future changes to the incorporated provisions as the changes take effect. The Basin Plan recognizes that that the Regional Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
30. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Tastes and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.
31. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until a valley wide drain is constructed to carry salts out of the basin. Until the drain is available, the Basin Plan establishes several salt management requirements, including:

- a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC shall not exceed the EC of the source water plus 500  $\mu\text{mhos/cm}$ . When the source water is from more than one source, the EC shall be a weighted average of all sources.
- b. Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000  $\mu\text{mhos/cm}$ , a chloride content of 175 mg/L, or a boron content of 1.0 mg/L.

These effluent limits are considered best practicable treatment or control (BPTC).

32. Title 22 in Table 64449 B establishes recommended, upper, and short-term ranges for EC, TDS, chloride, and sulfate. The recommended and upper ranges are 900 and 1,600  $\mu\text{mhos/cm}$  for EC, 500 and 1,000 mg/L for TDS, and 250 and 500 mg/L for chloride and for sulfate, respectively.
33. The list of crops in [Finding 20](#) is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge, but is representative. Though salt and boron sensitive crops could potentially be grown in Class I soils, none of these crops were observed or reported as being currently grown in the area based on DWR land use maps, and the soils in the area are not Class I soils.

### **Antidegradation**

34. State Water Resources Control Board Resolution No. 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:
  - a. The degradation is consistent with the maximum benefit to the people of the State;
  - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
  - c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives; and
  - d. The discharger employs BPTC to minimize degradation.
35. In general, shallow groundwater exceeds Water Quality Objectives for EC, TDS, and sulfate. EC and TDS concentrations in background groundwater exceed the EC and TDS concentrations of the effluent. Chloride and sodium concentrations of the shallow groundwater are elevated when compared to the supply water. The discharge of tomato processing wastewater from the Facility will not degrade the beneficial uses of groundwater beneath the Use Area because the first encountered groundwater is not of high quality. The concentrations of the effluent ([Finding 10](#)) are less than the concentrations reported for background groundwater ([Finding 23](#)).

### **Treatment and Control Practices**

36. The proposed discharge described in [Findings 11 through 16](#), once completed, provides treatment and control of the discharge that incorporates:
- a. Removal of solids at the plant before discharge to the Use Area. Solids will be hauled offsite and used as cattle feed or land applied as fertilizer;
  - b. Application of wastewater lower than plant uptake rates for nitrogen and low organic loading;
  - c. Application of wastewater at rates that will not allow wastewater to stand for more than 24 hours;
  - d. Blending of wastewater with freshwater to meet the agronomic requirements for crop growth; and
  - e. At least daily inspection of the Use Area during times of discharge.
37. This Order establishes groundwater limitations for the facility that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. This Order contains requirements for a groundwater assessment for assuring that the highest water quality consistent with the maximum benefit to the people of the State will be achieved.
38. According to Pollution Abatement in the Fruit and Vegetable Industry, published by the United States Environmental Protection Agency (US EPA Publication No. 625/3-77-0007) (hereafter Pollution Abatement), in applying food-processing wastewater to land for biological treatment, the loading of BOD<sub>5</sub> should not exceed 100 lbs/acre/day (as a cycle average) to prevent nuisance odors.

### **Water Recycling Criteria**

39. State Water Board Resolution No. 77-1, Policy with Respect to Water Recycling in California, encourages recycling projects that replace or supplement the use of fresh water, and the Water Recycling Law (California Water Code Section 13500-13529.4) declares that utilization of recycled water is of primary interest to the people of the State in meeting future water needs.
40. The Basin Plan encourages recycling on irrigated crops wherever feasible and indicates that evaporation of recyclable wastewater is not an acceptable permanent disposal method where the opportunity exists to replace an existing use or proposed use of fresh water with recycled water.

### Designated Waste and Title 27

41. California Water Code (CWC) Section 13173 defines designated waste as either:
- a. Hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Section 25143 of the Health and Safety Code.
  - b. Non-hazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions as a waste management unit, could be released in concentrations exceeding applicable water quality objectives or could reasonably be expected to affect beneficial uses of the waters of the state contained in the appropriate state water quality control plan.
42. Release of designated waste is subject to full containment pursuant to the requirements of Title 27, California Code of Regulations (CCR), Section 20005 et seq. (hereafter "Title 27"). Title 27 Section 20090(b) exempts discharges of designated waste to land from Title 27 containment standards provided the following conditions are met:
- a. The applicable regional water board has issued waste discharge requirements, or waived such issuance;
  - b. The discharge is in compliance with the applicable basin plan; and
  - c. The waste is not hazardous waste and need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.

### CEQA

43. On 12 September 2006, the Kings County Planning Commission adopted Resolution No. 06-11, which approved the Initial Study and adopted a Negative Declaration for the construction of the Corcoran Tomato Processing Facility and the discharge/recycling of wastewater to an approximately 540-acre disposal area. Regional Water Board Staff reviewed and commented on the Initial Study.
44. This Order implements measures necessary to mitigate any adverse impacts to groundwater from the Facility to less than significant levels, including:
- a. [Effluent Limitation B.1](#), which restricts the monthly average flow to 1.4 mgd;
  - b. [Discharge Specification C.4](#), which stipulates the wastewater will be blended with irrigation water to at least a 1:1 ratio; and
  - c. [Discharge Specification C.5](#), which stipulates waste constituents cannot be released or discharged in a concentration or mass that causes violation of the Order's groundwater limitations.

### **General Findings**

45. Pursuant to CWC Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.
46. The Regional Water Board will review this Order periodically and will revise requirements when necessary.
47. CWC Section 13267(b) states that: "In conducting an investigation specified in subdivision (a), the Regional Water Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."
48. The technical reports required by this Order and the attached Monitoring and Reporting Program No. [R5-2008-0015](#) are necessary to assure compliance with these waste discharge requirements. The Discharger operates the Facility that discharges the waste subject to this Order.
49. The California Department of Water Resources set standards for the construction and destruction of groundwater wells, as described in California Well Standards Bulletin 74-90 (June 1991) and Water Well Standards: State of California Bulletin 94-81 (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to CWC Section 13801, apply to all monitoring wells.

### **Public Notice**

50. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
51. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

52. All comments pertaining to the discharge were heard and considered in a public meeting.

**IT IS HEREBY ORDERED** that, pursuant to Sections 13263 and 13267 of the CWC, J. G. Boswell and its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

**A. Prohibitions**

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated wastes, except as allowed by Provision E.2 of Standard Provisions and Reporting Requirements, is prohibited.
3. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, California Code of Regulations, Section 2510 et seq., is prohibited. Discharge of waste classified as 'designated,' as defined in California Water Code Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
4. Application of treated wastewater in a manner or location other than that described herein is prohibited.

**B. Effluent Limitations**

1. The monthly average discharge flow shall not exceed 1.4 mgd.
2. Average BOD loading to the Use Area shall not exceed 100 lbs/acre/day, both long-term and over the course of any discharge cycle (i.e., the time between successive applications).

**C. Discharge Specifications**

1. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
2. Objectionable odors shall not be perceivable beyond the limits of the Use Area property at an intensity that creates or threatens to create nuisance conditions.
3. Application of waste constituents to the Use Area shall be at reasonable agronomic rates to preclude creation of a nuisance or degradation of groundwater, considering the crop, soil, climate, and irrigation management system. The annual nutritive loading of the Use Area, including the nutritive value of organic and chemical fertilizers and of the wastewater shall not exceed the annual crop demand.
4. Wastewater shall be blended with irrigation water (i.e., well water or canal water) at a minimum freshwater to wastewater ratio of 1:1.

5. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of groundwater limitations.

#### **D. Use Area Specifications**

1. The perimeter of the Use Area shall be graded to prevent ponding along public roads or other public areas and prevent runoff onto adjacent properties not owned or controlled by the Discharger.
2. No physical connection shall exist between tomato processing wastewater and any domestic water supply or domestic well, or between wastewater piping and any irrigation well that does not have an air gap or reduce pressure principle device.
3. The Use Area shall be managed to prevent breeding of mosquitoes. More specifically:
  - a. All applied irrigation water must infiltrate completely within a 48-hour period;
  - b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation; and
  - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.

#### **E. Solids Specifications**

1. Any handling and storage of solids and sludge at the Facility or in the Use Area shall be temporary, and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations of this Order.
2. Collected screenings, sludge, and other solids removed from the liquid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.
3. Any proposed change in solids use or disposal practice shall be reported to the Executive Officer at least 90 days in advance of the change.

#### **F. Groundwater Limitations**

Release of waste constituents from any treatment or storage component associated with the Facility shall not cause or contribute to groundwater:

- a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality, whichever is greater.

- (i) Nitrate as nitrogen of 10 mg/L.
  - (ii) Total coliform organisms of 2.2 MPN/100 mL;
  - (iii) For constituents identified in Title 22, the MCLs quantified therein.
- b. Containing taste or odor-producing constituents, or toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

## **G. Provisions**

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as Standard Provisions(s).
2. The Discharger shall comply with Monitoring and Reporting Program (MRP) No. [R5-2008-0015](#), which is part of this Order, and any revisions thereto as adopted by the Regional Water Board or approved by the Executive Officer. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger self-monitoring reports.
3. The Discharger shall keep at the Facility a copy of this Order, including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
4. The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of the Order.
5. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
6. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Regional Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing

evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Regional Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

7. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the appropriate Regional Water Board office.
8. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of [Standard Provision B.3](#) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Regional Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.
9. The pH of the discharge shall not be less than 4.5 or greater than 10 pH units for more than three consecutive 24-hour composite sampling events. In the event that the pH of the discharge is outside of this range for more than three consecutive sampling events, the Discharger shall submit a technical evaluation in its monthly SMRs documenting the pH of the blended discharge to the Designated Disposal Area, and if necessary demonstrate that the effect of the discharge on soil pH will not exceed the buffering capacity of the soil profile.
10. If the Regional Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of an objective for groundwater, this Order may be reopened for consideration of addition or revision of appropriate numerical effluent or groundwater limitations for the problem constituents.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 25 January 2008.

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PAMELA C. CREEDON, Executive Officer

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2008-0015  
J. G. BOSWELL, CORCORAN TOMATO PROCESSING FACILITY  
KINGS COUNTY

-16-

Order Attachments:

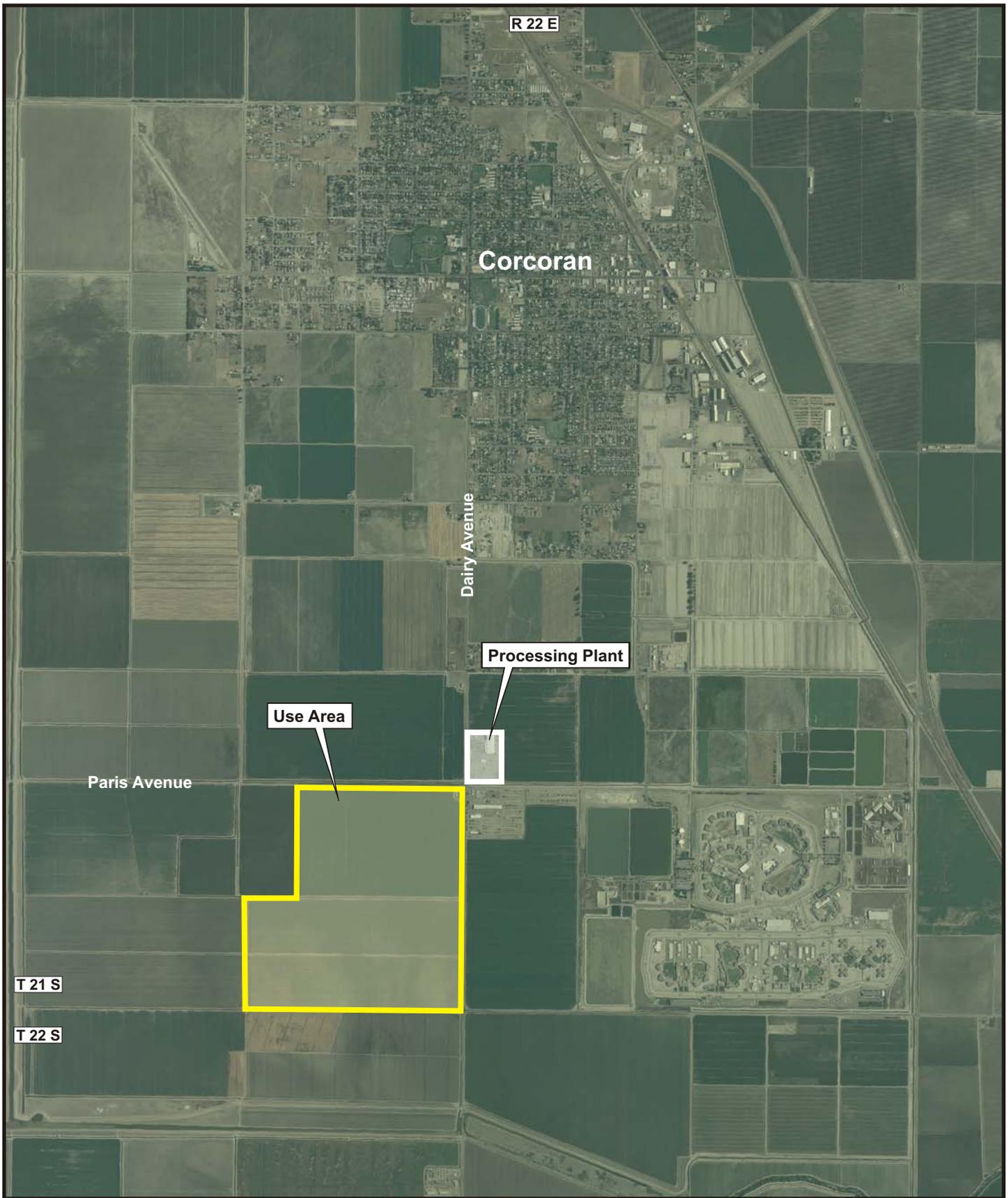
Monitoring and Reporting Program

A Site Map – J.G. Boswell Co., Corcoran Tomato Processing Facility

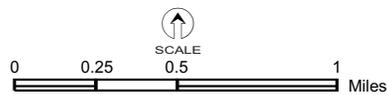
B. Process Flow Diagram – J.G. Boswell Co., Corcoran Tomato Processing Facility

C. Standard Provisions (1 March 1991) (separate attachment to Discharger only)

JSP/DKP: 1/25/08

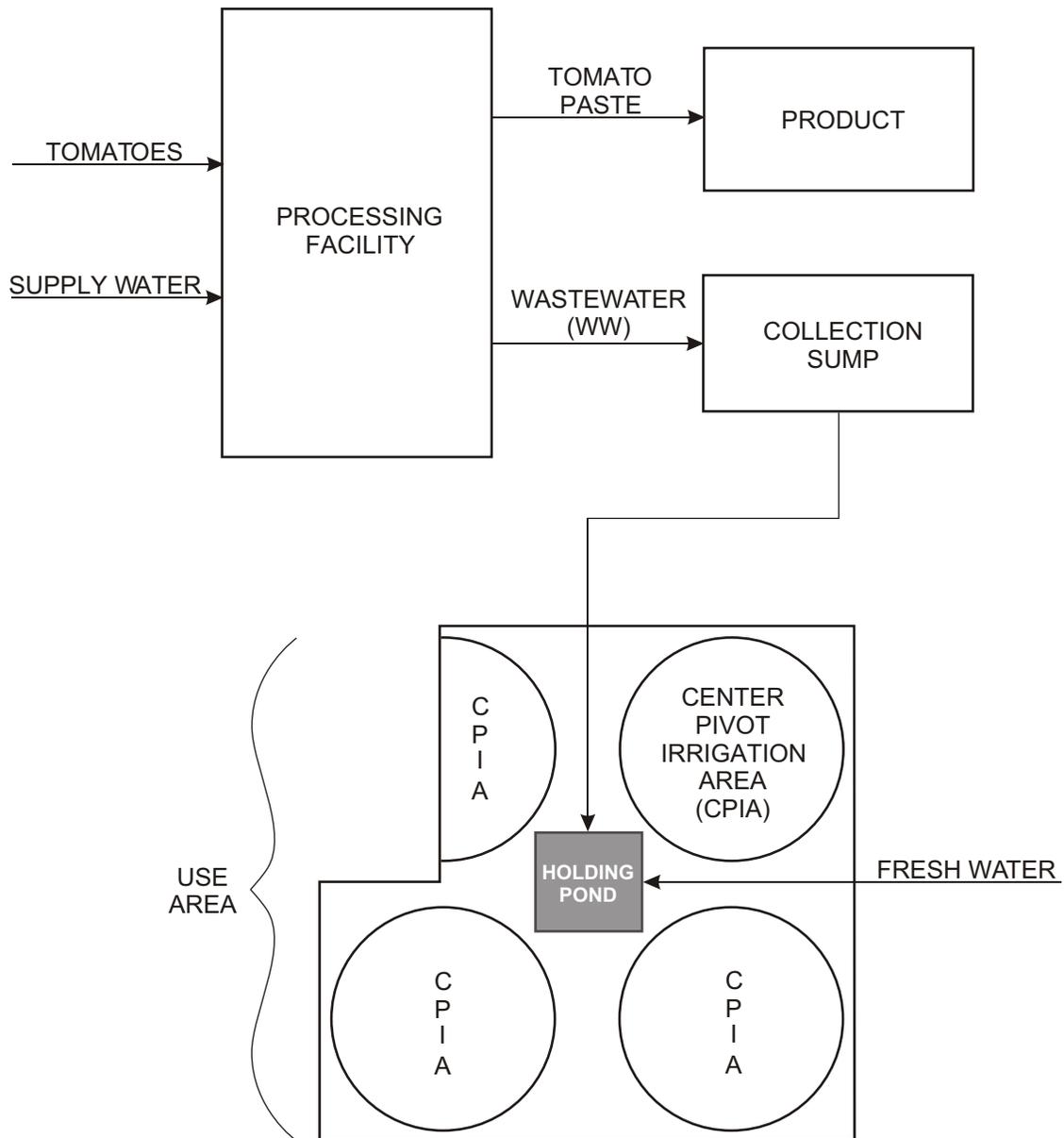


Map Source:  
 NAIP Aerial Photograph (2005)  
 Sections 26, & 34, T21S R22E, MDB&M



**SITE MAP**  
 ORDER NO. R5-2008-0015  
 WASTE DISCHARGE REQUIREMENTS  
 FOR  
 J.G. BOSWELL CO.  
 CORCORAN TOMATO PROCESSING FACILITY  
 KINGS COUNTY

**ATTACHMENT A**



\*NOT TO SCALE

**PROCESS FLOW DIAGRAM**  
 ORDER NO. R5 - 2008- 0015  
 WASTE DISCHARGE REQUIREMENTS  
 FOR  
 J.G. BOSWELL CO.  
 CORCORAN TOMATO PROCESSING FACILITY  
 KINGS COUNTY

**ATTACHMENT B**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2008-0015  
FOR  
J. G. BOSWELL COMPANY  
CORCORAN TOMATO PROCESSING FACILITY  
KINGS COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code section 13267.

The Discharger shall not implement any changes to this MRP unless and until the Regional Board adopts or the Executive Officer issues a revised MRP. Changes to sample location shall be established with concurrence of Regional Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer. All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991. The results of analyses performed in accordance with specified test procedures, taken more frequently than required at the locations specified in this MRP, shall be reported to the Regional Water Board and used in determining compliance.

Field test instruments (such as pH) may be used provided that:

1. the operator is trained in the proper use of the instrument;
2. the instruments are calibrated prior to each use;
3. instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. field calibration reports are submitted as described in the "Reporting" section of this MRP.

Each laboratory report shall clearly identify the following:

1. analytical method;
2. measured value;
3. units;
4. what constituent a value is reported as;
5. method detection limit (MDL);
6. reporting limit (RL) (i.e., a practical quantitation limit or PQL);
7. documentation of cation/balance for general minerals analysis of supply water and groundwater samples.

All laboratory results shall be reported down to the MDL. Non-detect results shall be reported as less than the MDL (<MDL). Results above the MDL, but below the concentration of the lowest calibration standard for multipoint calibration methods or below the reporting limit for other methods, shall be flagged as estimated.

Analytical procedures shall comply with the methods and holding times specified in: *Methods for Chemical Analysis of Water and Wastes* (EPA-600/4-79-020, 1983); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA/600/R-93/100, 1993); *Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition* (WEF, APHA, AWWA); and *Soil, Plant and Water Reference Methods for the Western Region, 2003, 2<sup>nd</sup> Edition* (hereafter Western Region Methods).

If monitoring consistently shows no significant variation in magnitude of a constituent concentration after at least 12 months of monitoring, the Discharger may request the MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

### DISCHARGE (EFFLUENT) MONITORING

During the processing season (July through October), the Discharger shall collect wastewater samples at a point in the system following the processing of tomatoes but before discharge to the Use Area. Time of collection of a grab sample shall be recorded. Effluent monitoring shall include the following:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type</u>	<u>Frequency</u>
Daily Flow <sup>1</sup>	gal/day	Continuous	Daily
Dissolved Oxygen	mg/L	Grab	Daily
Electrical Conductivity	µmhos/cm	24 hr – Composite <sup>2</sup>	Weekly
pH	pH units	24 hr – Composite	Weekly
BOD <sub>5</sub> <sup>3</sup>	mg/L	24 hr – Composite	Weekly
Total Suspended Solids (TSS)	mg/L	24 hr – Composite	Weekly
Total Kjeldahl Nitrogen (TKN)	mg/L	24 hr – Composite	Monthly
Ammonia (as NH <sub>3</sub> -N)	mg/L	24 hr – Composite	Monthly
Nitrate(as NO <sub>3</sub> -N)	mg/L	24 hr – Composite	Monthly
Total Nitrogen	mg/L	24 hr – Composite	Monthly
Inorganic TFDS <sup>4</sup>	mg/L	24 hr – Composite	Monthly
General Minerals <sup>5</sup>	mg/L	24 hr – Composite	Annually <sup>6</sup>

See footnotes on next page.

- 1 Flow shall be measured using a magnetic or ultrasonic flow meter.
- 2 Unless otherwise approved, 24-hour composite samples shall be collected using a composite wastewater sampler synchronized with a flow meter to take flow proportional (volumetric) samples. While being composited samples shall be refrigerated at 4 °C (39.2 °F).
- 3 Five-day, 20°C biochemical oxygen demand (BOD<sub>5</sub>)
- 4 TFDS, as used in this MRP, shall be determined using EPA Test Method No. 160.1 for combined organic and inorganic TFDS and EPA Method No. 160.4 for inorganic TFDS.
- 5 General Minerals, as used in this MRP, shall include the constituents in the General Minerals Analyte List below.
- 6 In July.

### General Minerals Analyte List<sup>1</sup>

Alkalinity (as CaCO <sub>3</sub> )	Carbonate (as CaCO <sub>3</sub> )	pH
Arsenic	Chloride	Potassium
Bicarbonate (as CaCO <sub>3</sub> )	EC	Sodium
Boron	Hardness (as CaCO <sub>3</sub> )	Sulfate
Calcium	Magnesium	TFDS

<sup>1</sup> General Minerals Analyte lists may vary depending on the laboratory, but shall include at least the above analytes and properties. An anion cation balance shall accompany results.

### WATER SUPPLY MONITORING

The supply water for the facility shall be monitored during the processing season (July through October) as follows:

<u>Constituent</u>	<u>Units</u>	<u>Measurement</u>	<u>Frequency</u>
EC <sup>1</sup>	µmhos/cm	Grab	Quarterly <sup>2</sup>
Nitrate (as Nitrogen)	mg/L	Grab	Quarterly <sup>2</sup>

<sup>1</sup> EC shall be reported as a flow-weighted average from all facility supply wells. Include copies of supporting calculations with monitoring reports.

<sup>2</sup> In July and October.

### USE AREA MONITORING

During the processing season (July though October), the Discharger shall perform the following routine monitoring and loading calculations for each discrete irrigation area. Data shall be collected and submitted quarterly:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type</u>	<u>Frequency</u>
Wastewater application field number	N/A	N/A	Daily
Precipitation	inches <sup>1</sup>	Rain gauge <sup>2</sup>	Daily
Wastewater application area	acres	N/A	Daily
Wastewater flow	mgd	Continuous	Daily
Wastewater loading	inches/day/acre <sup>3</sup>	Calculated	Daily

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type</u>	<u>Frequency</u>
Supplemental irrigation flow	mgd	Estimated	Daily
Supplemental irrigation flow	inches/day/acre <sup>3</sup>	Calculated	Daily
Total hydraulic loading rate <sup>4</sup>	Inches/day/acre <sup>3</sup>	Calculated	Daily
BOD <sub>5</sub> loading rate <sup>5</sup>			
on application day <sup>6</sup>	lbs/acre	Calculated	Daily
averaged over application cycle <sup>7</sup>	lbs/acre/day	Calculated	Daily
Monthly nitrogen loading rates <sup>8</sup>			
from wastewater	lbs/acre	Calculated	Monthly
from fertilizers	lbs/acre	Calculated	Monthly
Cumulative Annual nitrogen loading rate <sup>9</sup>	lbs/acre	Calculated	Monthly
Inorganic TDS loading rates <sup>10</sup>	lbs/acre/month	Calculated	Monthly

<sup>1</sup> Report to the nearest 0.1 inch.

<sup>2</sup> National Weather Service data from the nearest weather station is acceptable.

<sup>3</sup> Report to the nearest 0.1 inch.

<sup>4</sup> Includes total liquid application (i.e., precipitation, wastewater, and irrigation water).

<sup>5</sup> BOD<sub>5</sub> loading rates shall be calculated using the applied volume of wastewater, actual application area, and the average of the three most recent results of wastewater BOD<sub>5</sub>.

<sup>6</sup> Application day, as referred to in this MRP, shall be defined as a 24-hour period.

<sup>7</sup> Application cycle, as referred to in this MRP, shall be defined as the period (in days) of wastewater application followed by resting interval until next wastewater application.

<sup>8</sup> Wastewater nitrogen loading rates shall be calculated using the applied volume of wastewater, actual application area, and the wastewater total nitrogen.

<sup>9</sup> Starting as zero each January 1.

<sup>10</sup> Inorganic TDS loading rates shall be calculated using the applied volume of wastewater, actual application area, and the average of the three most recent results of wastewater inorganic TDS.

## REPORTING

The Discharger shall report monitoring data and information as required in this MRP and as required in the Standard Provisions.

Monitoring data and/or discussions submitted concerning the quality of the discharge must also be signed and certified by the chief plant operator. When reports contain laboratory analyses performed by the Discharger and the chief plant operator is not in the direct line of supervision of the laboratory, reports must also be signed and certified by the chief of the laboratory.

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the discharge monitoring report.

### A. Monthly Reports

Daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly monitoring reports shall be submitted to the Regional Board **by the 1<sup>st</sup> day of the second month following sampling** (i.e., the August Report is due by 1 October). At a minimum, the reports shall include:

1. Results of effluent and use area (land application) monitoring;
2. Calculated Monthly Average Daily Flow;
3. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
4. Copies of laboratory analytical reports; and
5. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

### B. Quarterly Reports

Daily, weekly, monthly, and quarterly monitoring data shall be reported in quarterly monitoring reports. Quarterly monitoring reports shall be submitted to the Regional Water Board **by the 1<sup>st</sup> day of the second month after the calendar quarter** (i.e., the 3<sup>rd</sup> Quarter Report is due 1 November). The monthly and quarterly reports shall be combined in months where both reports are due. At a minimum, the quarterly reports shall include:

1. Results of discharge, and use area monitoring;
2. Calculated Monthly Average Daily Flow;
3. Daily, Monthly, and Average loading calculations;
4. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
5. Copies of laboratory analytical reports; and
6. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

### C. Annual Reports

An Annual Report shall be prepared as a fourth quarter monitoring report. The Annual Report will include all monitoring data required in the monthly/quarterly schedule plus the results of any annually sampled constituents (e.g., general minerals, selected metals, etc). The Annual Report shall be submitted to the Regional Board **by 1**

**February of the year following the year the samples were collected.** In addition to the data normally presented, the Annual Report shall include the following:

1. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal;
2. The names and telephone numbers of persons to contact regarding the CTPF for emergency and routine situations;
3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (standard Provision C.4);
4. The most recent water supply report including laboratory data;
5. A summary of solids monitoring, including:
  - a. Annual solids production in dry tons; and
  - b. A description of the disposal methods used at the facility. If more than one method is used, include the percentage of solids production disposed of by each method.
6. A summary and discussion of the compliance record for the reporting period. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with this Order.

All technical reports required herein must be overseen and certified by a California registered civil engineer, certified engineering geologist, or certified hydrogeologist in accordance with California Business and Professions Code, sections 6735, 7835, and 7835.1. All reports submitted in response to this Order shall comply with the signatory requirements in Standard Provision B.3.

A transmittal letter shall accompany each self-monitoring report. The letter shall discuss any violations during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by:

\_\_\_\_\_  
PAMELA C. CREEDON, Executive Officer

\_\_\_\_\_  
25 January 2008

(DATE)

MONITORING AND REPORTING PROGRAM NO. R5-2008-0015  
JG BOSWELL CORCORAN TOMATO PROCESSING FACILITY  
KINGS COUNTY

## INFORMATION SHEET

ORDER NO. R5-2008-0015  
J.G. BOSWELL  
CORCORAN TOMATO PROCESSING FACILITY  
KINGS COUNTY

### **Background**

J.G. Boswell Company (Discharger), a California corporation, is constructing a tomato processing facility south of Corcoran, in Kings County. The Corcoran tomato processing facility (Facility) will process tomatoes for tomato paste and proposes an average daily flow of about 1.4 million gallons per day (mgd) during the processing season (July through October). The facility formerly contained an onion processing facility operated by the Discharger.

The Discharger submitted a Report of Waste Discharge (RWD) dated 5 April 2007, in support of the proposed discharge to land. Tomatoes will arrive at the Facility in trucks, weighed, and graded. Tomatoes will be unloaded and initially rinsed with an evaporate water, then rinsed twice with clean well water before sorting the tomatoes. The tomatoes will be delivered to the choppers for processing and to mix tanks for further processing. The Facility will operate nearly 24 hours a day 7 days a week during the processing season which typically runs from late June through the third week of October.

Wastewater will be temporarily contained at the Facility in a sump, and then pumped to a holding pond on the adjacent Use Area. Wastewater will be blended with irrigation water in the holding pond at a minimum of a 1:1 ratio freshwater to wastewater. The blended wastewater will then be applied to the 540-acre Use Area using a Center Pivot Sprinkler irrigation system. The 540-acre Use Area will be divided into quadrants and each quadrant will have a center pivot sprinkler system.

The Center Pivot sprinklers will apply wastewater at a rate of about 0.5 inch per day and each system will take about 24 hours to complete one cycle. The wastewater will be applied followed by a minimum of 24 hours of drying, then another day of 0.5 inch application, followed again by a day to dry, etc. The resulting application is 45 inches annually.

The Discharger reports that nitrogen will be applied to the soil at a rate of about 57 pounds per acre per year (lb/ac/yr) and plans to grow primarily alfalfa and Sudan grass. The crops will require supplemental nitrogen fertilizer to maintain them.

Given the estimated flow rate of 1.4 mgd and an average BOD concentration of 247 mg/L, the Discharger indicates the maximum BOD loading rate for any day is 13 lbs/acre with an average BOD loading rate of 8 lbs/acre/day. These rates are well below the USEPA recommended rate of 100 lbs/acre/day.

### **Solids Disposal**

Tomatoes unsuitable for processing will then be removed and diverted as cattle feed. Seeds and peels will be separated and diverted to the cattle feed line. The Discharger estimates about 114 tons of these solids are generated per day. Solids in the waste stream will settle out when they reach the holding pond. After the processing season, the sediment will be removed

from the pond and land applied as fertilizer outside of the center pivot irrigation system area. The Discharger estimates they will generate about 1,000 cubic yards of sediment annually from the holding pond.

### **Groundwater Conditions**

The Facility and Use Area are located on the fringe of the former Tulare Lake. Regionally, an upper unconfined aquifer is separated from a lower confined aquifer by an extensive clay layer (Corcoran Clay). Supply wells draw water from below the Corcoran Clay and water quality is generally good. Shallow or first encountered groundwater is of poor quality. Depth to first encountered groundwater under natural conditions is about three feet bgs. However, the Use Area is underlain with subsurface drains (tile drains), which keeps the depth to water below 5 feet bgs. Available data indicates the top of the Corcoran Clay is about 600 feet bgs and is approximately 80 to 100 feet thick beneath the area.

Groundwater quality of the lower confined aquifer is typically of excellent quality (EC concentrations between 250 and 500 umhos/cm) and provides the majority of water for domestic purposes in the area.

The shallow or perched aquifer is of poor water quality. The Discharger collected five groundwater samples from soil borings advanced within the Use Area in 2006 before discharging tomato wastewater to the property. EC concentrations ranged from about 1050 umhos/cm to 7,750 umhos/cm. Nitrate as nitrogen concentrations ranged from 6.3 to 57.9 milligrams per liter (mg/L). Sulfate concentrations ranged from about 330 to 1,900 mg/L. All EC, chloride, sulfate, and TDS concentrations exceed primary or secondary maximum contaminant levels. The wastewater has EC concentrations that are two to ten times less than the lowest levels reported for the shallow groundwater indicating the wastewater will not degrade water quality with respect to these constituents.

### **Compliance History**

The facility is proposed; hence, there is no compliance history. The Discharger operates the Rio Bravo Tomato processing facility in Kern County. Rio Bravo files were reviewed and no significant violations were observed. Rio Bravo operates using Interim Monitoring Program Order No. 5-00-827 and appears to be compliant with effluent limitations.

### **Basin Plan, Beneficial Uses, and Regulatory Considerations**

The Basin Plan indicates the greatest long-term problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Regional Water Board encourages proactive management of waste streams by dischargers to control addition of salt through use, and has established an incremental EC limitation of 500 umhos/cm as a measure of the maximum permissible addition of salt constituents through use.

Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000  $\mu\text{mhos/cm}$ , a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

### **Antidegradation**

The antidegradation directives of State Water Board Resolution No. 68-16 (Resolution 68-16), "Statement of Policy With Respect to Maintaining High Quality Waters in California," or "Antidegradation Policy" require that waters of the State that are better in quality than established water quality objectives be maintained "consistent with the maximum benefit to the people of the State." Waters can be of high quality for some constituents or beneficial uses and not others. Policy and procedures for complying with this directive are set forth in the basin plan.

The receiving water is not of high quality as it contains naturally occurring waste constituents in concentrations that exceed water quality objectives. All EC, TDS, and sulfate concentrations observed in shallow groundwater are greater than the estimated effluent concentration.

### **Treatment Technology and Control**

The Facility will provide treatment and control of the discharge that incorporates:

- a. Removal of solids at the plant before discharge to the Use Area. Solids will be hauled offsite and used as cattle feed or land applied as fertilizer;
- b. Application of wastewater lower than plant uptake rates for nitrogen and low organic loading;
- c. Application of wastewater at rates that will not allow wastewater to stand for more than 48 hours;
- d. Blending of wastewater with freshwater to meet the agronomic requirements for crop growth; and
- e. At least daily inspection of the Use Area during times of discharge.

### **Title 27**

Title 27, CCR, section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Title 27 Section 20090(b) exempts discharges of designated waste to land from Title 27 containment standards provided the Regional Water Board has issued waste discharge requirements or waived such issuance; the discharge is in compliance with the Basin Plan; and

the waste need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.

Accordingly, the discharge of effluent and the operation of treatment or storage facilities associated with a food processing facility can be allowed without requiring compliance with Title 27, provided the resulting degradation of groundwater is in accordance with the Basin Plan.

### **CEQA**

The Kings County Planning Commission adopted Resolution No. 06-11 on 11 September 2006. The Resolution approved an Initial Study and adopted a Negative Declaration for the construction of the Corcoran Tomato Processing Facility and the discharge/recycling of wastewater to the approximately 540-acre disposal area. Regional Water Board staff reviewed the Initial Study and provided comments to the Discharger regarding the lining of the storage pond on the Use Area property.

### **Proposed Order Terms and Conditions**

#### **Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions**

The proposed Order prohibits discharge to surface waters and water drainage courses.

The proposed Order would approve the proposed monthly average daily discharge flow limitation of 1.4.

The proposed Order would set an Effluent Limitation on BOD loading of 100 lbs/acre/day, seasonally and over any particular discharge cycle. Given the estimated flow rate of 1.4 mgd and an average BOD concentration of 247 mg/L, the Discharger indicates the maximum BOD loading rate for any day is 13 lbs/acre/day with an average BOD loading rate of 8 lbs/acre/day.

To provide for even distribution of wastewater to the Use Area, the proposed Order requires wastewater to be blended with fresh water at a ratio of 1:1, and applied using the center pivot irrigation system.

The proposed WDRs would prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedance of these objectives or natural background water quality, whichever is greatest.

#### **Monitoring Requirements**

Section 13267 of the CWC authorizes the Regional Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and

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KINGS COUNTY

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thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment of civil administrative liability where appropriate.

The proposed Order includes effluent monitoring requirements, Use Area monitoring, and water supply monitoring. The monitoring is necessary to evaluate the extent of the potential degradation from the discharge.

**Reopener**

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The proposed Order would set limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.

JSP 12/26/07